



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,141	09/23/2003	Sherif Yacoub	200300101-1	2017
22879 7590 12/08/2008 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER SAINT CYR, LEONARD				
ART UNIT		PAPER NUMBER		
2626				
NOTIFICATION DATE		DELIVERY MODE		
12/08/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM

mkraft@hp.com

ipa.mail@hp.com

Office Action Summary

Application No.

10/668,141

Applicant(s)

YACOB, SHERIF

Examiner

LEONARD SAINT CYR

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/23/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/CD/CD)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 - 20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues neither Bennett nor Johnson teach assigning the speech utterance to a single ASR engine when the plurality of different ASR engines are busy such that assessing resources is within a threshold value; assigning the speech utterance to a plurality of different ASR engines when the plurality of different ASR engines are not busy such that assessing resources is within a threshold value (Amendment, pages 6 – 8).

The examiner agrees, but the claims are now rejected in view of new grounds of rejection. Please see claim rejection below.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al., (US PAP 2002/0193991) in view of Johnson (US Patent 6, 728,671), and further in view of Watanabe et al., (US Patent 4,641,342).

As per claims 1, 8, and 14, Bennett et al., teach an automatic speech recognition (ASR), that comprises:

receiving a speech utterance from a user ("the input stream is received"; paragraph 23, line 3);

generating text of the speech utterance with either the single ASR engine or plurality of ASR engines ("individual result sets are then coalesced"; paragraph 26, lines 1, and 2).

However, Bennett et al., do not specifically teach assessing resources of each of a plurality of different ASR engines to determine which of the plurality of different ASR engines are busy serving users; assigning the speech utterance to a single ASR engine when the plurality of different ASR engines are busy such that assessing resources is within a threshold value; assigning the speech utterance to a plurality of different ASR engines when the plurality of different ASR engines are not busy such that assessing resources is within a threshold value.

Johnson et al., teach determining whether the usage level of the ASR input channels is greater than a first predetermined threshold, such as 75% threshold; and monitoring an energy level of a caller input channels. Various advantages of the present invention include actually serving a caller by an interactive system, without placing the caller on hold and without loss of the call, while all ASR input channels are busy serving other callers (col.8, lines 37 – 40; Abstract, lines 16 – 18; col.2, lines 41 - 45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine whether or not the recognizers are available

as taught by Johnson et al., in Bennett et al., because that would help better rout the stream input.

However, Bennett et al., in view of Johnson et al., do not specifically teach assigning the speech utterance to a single ASR engine when the plurality of different ASR engines are busy such that assessing resources is within a threshold value; assigning the speech utterance to a plurality of different ASR engines when the plurality of different ASR engines are not busy such that assessing resources is within a threshold value.

Watanabe et al., teach detector can also be used to selectively switch an active one of a plurality of user channels to one of a smaller number of voice recognizers. The control means searches for any idle input terminal 121- 12n at the recognition means. ...when an idle terminal is found, the change-over switch 14 operates to connect the requested user channel with the idle recognition input terminal. A change-over switch 14 connects m voice pattern outputs to n separate recognition input terminals 121, 122, . . . , 12j, . . . , 12n of a recognition means 15 which recognizes the voices received on its n separate recognition input terminals as the outputs from the change-over switch 14. The recognition means 15 can recognize n separate voice simultaneously (Abstract, lines 7 – 10; col.4, lines 5 – 12, and 36 - 46; col.6, lines 4 – 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize n separate voices simultaneously using a single recognizer as taught by Watanabe et al in Bennett et al., because that would

Art Unit: 2626

provide a voice input system improved to avoid a mis-recognition or a rejection (col.1, lines 29 – 32).

As per claims 2, and 9, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further disclose monitoring port utilization for each ASR engine (Johnson; “usage level of the ASR input”; col.8, lines 37 – 40).

As per claims 3, and 10, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further recite evaluating processing power (Johnson; “detect energy”; col.5, lines 26 – 28).

As per claim 4, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further disclose monitoring memory utilization and input/output utilization (Johnson; “memory buffer”; col.2, lines 23 – 25).

As per claim 5, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further disclose monitoring a number of users providing speech utterances (Johnson; “active calls, as those callers”; col.4, lines 3 - 8).

As per claim 6, and 7, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further suggest determining if assessing resources is within a threshold value occurs when port utilization of the single ASR engine is lower than a port

utilization threshold of about 80%; if assessing resources is within a threshold value occurs when port utilization of two ASR engines is lower than a predefined threshold of about 75% (Johnson; "greater than a first predetermined threshold, such as 75% threshold"; col.8, lines 37 – 40; Abstract, lines 16 – 18).

As per claim 11, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further disclose combining results of ASR engines if the group of ASR engines is selected, the group of ASR engines being adapted to provide a more accurate recognition of the utterance than a single ASR engine (Bennett et al., "individual result sets are then coalesced"; paragraph 26, lines 1 – 3; paragraph 43, lines 1 - 3).

As per claim 12, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further disclose evaluating resources of the system evaluates resources to simultaneously run multiple ASR engines (Bennett; "simultaneous use of three machine speech recognition systems"; paragraph 31, lines 10 – 12).

As per claim 13, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further disclose evaluating resources of the system evaluates ASR ports, system resources and call handlers (Johnson; "usage level of the ASR input"; col.8, lines 37 – 40; col.4, lines 3 - 8).

As per claim 15, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further disclose selecting an ASR engine that has most available resources (Bennett; "high accuracy"; paragraph 20, lines 7 – 9).

As per claims 16, and 17, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further disclose a telephone network comprising at least one switching service point coupled to the computer system, wherein at least one communication device in communication with the switching service point to provide the speech utterance (Watanabe; col.4, lines 36 - 46).

As per claims 18 - 20, Bennett et al., in view of Johnson et al., and further in view Watanabe et al., further disclose that the resource management application comprises a recognition proxy component and a resource monitoring component, wherein the resource management component collects and analyzes information about the resources available on the system, and wherein the resource monitoring component mediates between the plurality of ASR engines and the resource management component (Johnson; "determining whether the usage level of the ASR input channels is greater than a first predetermined threshold, such as 75% threshold; and monitoring an energy level of a caller input channel"; col.8, lines 37 – 40; Abstract, lines 16 – 18).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 Form.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD SAINT CYR whose telephone number is (571) 272-4247. The examiner can normally be reached on Mon- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS
11/25/08

/Richemond Dorvil/
Supervisory Patent Examiner, Art Unit 2626